

LIST OF CURRENT CLAIMS

12. (Currently Amended) A method for producing a circuit unit comprising an insulating carrier substrate (1) on which a conductive coil (3) is located, and an integrated circuit (7) whose connection points (27) are electrically connected with the coil ends (15, 19) directly or via contacts (2S), comprising the following steps:

- a) applying a coil section (9) with at least one turn to the substrate (1),
- b) covering at least the area of the applied coil section with an insulating layer (11) containing at least one opening (13) through which at least one of the covered turns of the coil section (9) is accessible,
- c) applying to the insulating layer (11) a further coil section (17) with at least one turn which is electrically connected with the previously covered coil section (9) through the at least one opening (13), the electric connection being produced by the coil material of the further coil section (17),
- e) electrically connecting the connection points (27) of the integrated circuit (7), or the contacts (25) of a module (23) containing the integrated circuit (7), with one end (15) of the coil section (9) located directly on the insulating substrate (1), on the one hand, and with one end (19) of the last applied coil section (17), on the other hand.

13. (Previously Presented) The method of claim 12, wherein the electric connection between the coil sections (9, 17) is carried out through the at least one opening (13) in the insulating layer (11) by laminating the insulating layer (11) or insulating layers (11) and the insulating substrate (1).

14. (Withdrawn) The method of claim 13, including disposing the conductive material (29) in the area of the at least one opening (13) before lamination.

15. (Withdrawn) The method of claim 12, including producing the at least one opening (13) in the insulating layer (11) before application of at least one of the coil sections (9, 17) separated by the insulating section (11), and filling the at least one opening (13) with the coil material during application of at least one of the coil layers (9, 17).

16. (Withdrawn) The method of claim 12, including filling the at least one opening (13) with conductive material (33) after application of the coil sections (9, 17) so as to form an electric connection between the coil sections (9, 17).

17. (Withdrawn) The method of claim 12, including transferring a conductive element (35) to the coil sections (9, 17) in such a way that the conductive element (35) forms an electric connection between the coil sections (9, 17) through the at least one opening (13).

18. (Withdrawn) The method of claim 12, including producing the at least one opening (13) by means of at least one wire (31) piercing the insulating layer (11) and at least partly the coil sections (9, 17) separated by the insulating layer (11), the wire (31) remaining in the insulating layer (11) and at least partly in the coil sections (9, 17) so as to form an electric connection between the coil sections (9, 17).

19. (Currently Amended) A The method of claim 12 for producing a circuit unit comprising an insulating substrate (1) on which a conductive, flat coil (3) is located, and an integrated circuit (7) whose connection points (27) are electrically connected with the coil ends (15,19) directly or via contacts (25), further comprising the steps of:

applying the coil (3) to the substrate (1) in such a way that the distance between the coil ends (15, 19) can be bridged by the connection points (27) of the integrated circuit (7) or by the contacts (25) of a module (23) containing the integrated circuit (7), and

mounting the integrated circuit (7) or the module (23) on the coil ends (15, 19) in such a way that the connection points (27) of the integrated circuit (7) and the coil ends (15, 19) or the contacts (25) of the module (23) and the coil ends (15, 19) touch, and

forming an electric contact between the connection points (27) and the coil ends (15, 19) or the contacts (25) and the coil ends (15, 19) solely through this touching.

20. (Previously Presented) The method of claim 19, including printing the coil (3) on the substrate (1), and mounting the integrated circuit (7) or the module (23) before the printed coil completely dries.

21. (Currently Amended) ~~A The method of claim 12, further comprising the steps of:~~ method for producing a circuit unit comprising an insulating carrier substrate (1) on which a conductive, flat coil (3) is located, and an integrated circuit (7) whose connection points (27) are electrically connected with the coil ends (15, 19) directly or via contacts (25), comprising the steps of:

incorporating the integrated circuit (7) or a module (23) containing the integrated circuit (7) in the substrate (1) in such a way that the connection points (27) of the integrated circuit (3) or the contacts (25) of the module are flush with the surface of the substrate (1),

then applying the coil (3) to the substrate (1) in such a way that the coil ends (15, 19) at least partly cover the connection points (27) or the contacts (25), and

forming an electric contact between the connection points (27) and the coil ends (15, 19) or the contacts (25) and the coil ends (15, 19) solely through this direct touching.

22. (Previously Presented) The method of claim 21, wherein the step of applying the coil to the substrate is carried out by printing the coil on the substrate.

23. (New) The method of claim 13, further comprising the steps of: applying the coil (3) to the substrate (1) in such a way that the distance between the coil ends (15, 19) can be bridged by the connection points (27) of the integrated circuit (7) or by the contacts (25) of a module (23) containing the integrated circuit (7), and

mounting the integrated circuit (7) or the module (23) on the coil ends (15, 19) in such a way that the connection points (27) of the integrated circuit (7) and the coil ends (15, 19) or the contacts (25) of the module (23) and the coil ends (15, 19) touch, and

forming an electric contact between the connection points (27) and the coil ends (15, 19) or the contacts (25) and the coil ends (15, 19) solely through this touching.

24. (New) The method of claim 13, further comprising the steps of:

incorporating the integrated circuit (7) or a module (23) containing the integrated circuit (7) in the substrate (1) in such a way that the connection points (27) of the integrated circuit (3) or the contacts (25) of the module are flush with the surface of the substrate (1),

then applying the coil (3) to the substrate (1) in such a way that the coil ends (15, 19) at least partly cover the connection points (27) or the contacts (25), and

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forming an electric contact between the connection points (27) and the coil ends (15, 19) or the contacts (25) and the coil ends (15, 19) solely through this direct touching.

ELECTION

Applicant hereby elects species I shown in FIG. 3 for prosecution on the merits. The claims readable on FIG. 3 are claims 12, 13 and 19-24.

Applicant hereby reserves all rights to the non-elected subject matter.

AMENDMENTS

In the amendments to the claims, claim 12 has been amended to recite that the electric connection is produced by the coil material of the further coil section (17). Support for this additional subject matter is clearly found in FIG. 3 in the drawings and in the specification on page 5, second last full paragraph.

It will be noted that claim 12 is a method claim that describes a method for forming the chip card recited in claim 1 of the parent application 08/686,026 (now U.S. patent 6,049,461). The subject matter of the current amendment made to claim 12 is likewise found in claim 1 of the parent application.

The remaining amended claims have been amended so as to directly or indirectly depend from claims 12 or 13.

It will be noted that new claims 23 and 24 recite substantially the same subject matter as recited in claims 19 and 21 but depend from claim 13 instead of claim 12.

Acceptance of the amendments to the claims is respectfully requested in the next communication from the Examiner.

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If any issues remain that may be resolved by a telephone or facsimile communication with the Applicant's Attorney, the Examiner is invited to contact the undersigned at the numbers shown below.

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Date: April 26, 2004

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Respectfully submitted,



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